CELL CALCIUM

Volume 12 Contents

Number 1 January 1991

Effect of GTP and Ca^{2+} on inositol 1,4,5-trisphosphate induced Ca^{2+} release from permeabilized rat exocrine pancreatic acinar cells 1
R. Engling, K.J. Föhr, T.P. Kemmer and M. Gratzl

Effect of low temperature on the cytosolic free Ca^{2+} in rat ventricular myocytes 11
B. Liu, L.C.H. Wang and D.D. Belke

Calcium inhibition of cardiac adenylyl cyclase. Evidence for two distinct sites of inhibition 19
R.A. Colvin, J.A. Oibo and R.A. Allen

Reassessment of Fura–2 and the ratio method for determination of intracellular Ca^{2+} concentrations 29
A. Uto, H. Arai and Y. Ogawa

Intracellular endocardial calcium and myocardial function in rat hearts 39
J. Wikman-Coffelt, S.T. Wu and W.W. Parmley

Two Ca^{2+} transport systems are distinguished on the basis of their Mg^{2+} dependency in a post-nuclear particulate fraction of bovine adrenal cortex 51
G. Guillemette, M. Poitras and G. Boulay

Erratum

Number 2/3 February/March 1991

OSCILLATIONS IN CELL CALCIUM
Collected Papers and Reviews — Edited by K. S. R. Cuthbertson and P. H. Cobbold

Preface 61
K. S. R. Cuthbertson and P. H. Cobbold

Cytoplasmic calcium oscillations: A two pool model 63
M. J. Berridge

Signal-induced Ca^{2+} oscillations: Properties of a model based on Ca^{2+}-induced Ca^{2+} release 73
G. Dupont, M. J. Berridge and A. Goldbeter

The hepatocyte calcium oscillator 87
P. H. Cobbold, A. Sanchez-Bueno and C. J. Dixon

Modelling receptor-controlled intracellular calcium oscillators 97
K. S. R. Cuthbertson and T. R. Chay

Spatial and temporal organization of calcium signalling in hepatocytes 111
A. P. Thomas, D. C. Renard and T. A. Rooney

Calcium oscillations in endothelial cells 127
R. Jacob

Receptor-activated cytoplasmic Ca^{2+} oscillations in pancreatic acinar cells: Generation and spreading of Ca^{2+} signals 135
O. H. Petersen, D. V. Gallacher, M. Wakui, D. I. Yule, C. C. H. Petersen and E. C. Toescu

Acetylcholine and cholecystokinin induce different patterns of oscillating calcium signals in pancreatic acinar cells 145
D. I. Yule, A. M. Lawrie and D. V. Gallacher

Cytosolic Ca^{2+} oscillations in REF52 fibroblasts: Ca^{2+}-stimulated IP_3 production or voltage-dependent Ca^{2+} channels as key positive feedback elements 153
A. T. Harootunian, J. P. Y. Kao, S. Paranjape, S. R. Adams, B. V. L. Potter and R.Y. Tsien

Ca^{2+} oscillations induced by histamine H_1 receptor stimulation in HeLa cells: Fura–2 and patch clamp analysis 165
R. Sauvé, A. Diarra, M. Chahine, C. Simoneau, N. Morier and G. Roy

Fluorescence digital image analysis of serotonin-induced calcium oscillations in single blood platelets 177
H. Nishio, Y. Ikegami and T. Segawa

Ca^{2+} waves in astrocytes 185
A. H. Cornell-Bell and S. M. Finkbeiner

Repetitive calcium transients in hamster oocytes 205
S. Miyazaki

The four dimensions of calcium signalling in *Xenopus* oocytes 217
S. Delisle

Propagation of cytoplasmic Ca^{2+} oscillations in clusters of pancreatic β-cells exposed to glucose 229
E. Gylfe, E. Grapengiesser and B. Hellman

Ca^{2+}-oscillations and Ca^{2+}-waves in mammalian cardiac and vascular smooth muscle cells 241
W. G. Wier and L. A. Blatter

A model for intracellular calcium signaling and the coordinate regulation of hormone biosynthesis, receptors and secretion 255
D. A. Leong

Number 4 April 1991

High-resolution measurement and calibration of Ca^{2+}-transients using Indo–1 in guinea-pig atrial myocytes under voltage clamp 269
G. Callewaert, P. Lipp, L. Pott and E. Carmeliet

Determination of Fura–2 dissociation constants following adjustment of the apparent Ca-EGTA association constant for temperature and ionic strength 279
D.L. Groden, Z. Guan and B.T. Stokes

Calcium pools in sea urchin eggs: Roles of endoplasmic reticulum and mitochondria in relation to fertilization 289
J.P. Girard, I. Gillot, G. De Renzis and P. Payan

Ammonium ions mobilize calcium from an internal pool which is insensitive to TRH and ionomycin in bovine anterior pituitary cells 301
S.L. Shorte, G.L. Collingridge, A.D. Randall, J.B. Chappell and J.G. Schofield

Nitrendipine-induced inhibition of calcium influx in a human T-cell clone: Role of cell depolarization 313
C. Randriamampita, G. Bismuth, P. Debré and A. Trautmann

Erratum

Number 5 May 1991

Spectrofluorimetric and image recordings of spontaneous and lectin-induced cytosolic calcium oscillations in Jurkat T cells 325
M.D. Payet, L. Bilodeau, J. Héroux, G. Harbec and G. Dupuis

Ca^{2+}-dependent and independent mitochondrial damage in hepatocellular injury 335
G. Bellomo, R. Fulceri, E. Albano, A. Gamberucci, A. Pompella, M. Parola and A. Benedetti

Increased intracellular calcium is associated with progression of HPV–18 immortalized human keratinocytes to tumorigenicity 343
L.R. Garrett, D.M. Coder and J.K. McDougall

Biochemical basis for the specificity of alloxan inactivation of calmodulin-dependent protein kinase II 351
R.F. Kloepper, L.L. Norling, M.L. McDaniel and M. Landt

Regulation of intracellular calcium homeostasis in *Trypanosoma cruzi*. Effects of calmidazolium and trifluoperazine 361
A.E. Vercesi, M.E. Hoffman, C.F. Bernardes and R. Docampo

Effects of Fe^{3+}-tumor cell interaction on Ca^{2+}-uptake by Ehrlich ascites tumor cells 371
L.J. Anghileri

COLOUR PLATE SECTION (Plates 1–6) 375

Number 6 June 1991

High and low cytosolic Ca^{2+} induced macrophage death? 381
HYPOTHESIS
N. Van Rooijen

Spectra of intracellular Fura–2 385
C.S. Owen

The Ca^{2+} release activities of D-*myo*-inositol 1,4,5-trisphosphate analogs are quantized 395
G. V. Denis and C. E. Ballou

Calcium homeostasis in bovine somatotrophs: calcium oscillations and calcium regulation by growth hormone-releasing hormone and somatostatin 403
S. R. Rawlings, J. Hoyland and W. T. Mason

Evidence that binding of Indo–1 to cardiac myocyte protein does not markedly change K_d for Ca^{2+} 415
H. Ikenouchi, G.A. Peeters and W.H. Barry

High levels of cytosolic free calcium inhibit dephosphorylation of insulin receptor and glycogen synthase 423
N. Begum, K.E. Sussman and B. Draznin

Measurement of mitochondrial and non-mitochondrial Ca^{2+} in isolated intact hepatocytes: a critical re-evaluation of the use of mitochondrial inhibitors 431
R. Fulceri, G. Bellomo, F. Mirabelli, A. Gamberucci and A. Benedetti

Diphenylamine-2-carboxylate (DPC) reduces calcium influx in a mouse mandibular cell line (ST_{885}) 441
P. Poronnik, D. I. Cook, D. G. Allen and J. A. Young

Number 7 July 1991

Inhibition of CD3-induced Ca^{2+} signals in Jurkat T-cells by myristic acid **449**
T. Nordström, C. Lindqvist, A. Ståhls, T. Mustelin and L.C. Andersson

Characterization of Ca^{2+} transients induced by intracellular photorelease of $InsP_3$ in mouse ovarian oocytes **457**
A. Peres, L. Bertollini and C. Racca

The effect of 25-hydroxycholesterol on accumulation of intracellular calcium **467**
Q. Zhou, S. Jimi, T.L. Smith and F.A. Kummerow

Calcium channels in PDGF-stimulated A172 cells open after intracellular calcium release and are not voltage-dependent **477**
J. Szöllösi, B.G. Feuerstein, G. Vereb, H.A. Pershadsingh and L.J. Marton

Calcium export by sodium-calcium exchange in bovine chromaffin cells **493**
D. A. Powis, K. J. O'Brien and H. R. K. von Grafenstein

Purified IP_3 receptor from smooth muscle forms an IP_3 gated and heparin sensitive Ca^{2+} channel in planar bilayers **505**
M. Mayrleitner, C.C. Chadwick, A.P. Timerman, S. Fleischer and H. Schindler

Digitonin-aided loading of Fluo–3 into embryogenic plant cells **515**
A.C.J. Timmers, H.-D. Reiss and J.H.N. Schel

Number 8 September 1991

Dose-dependency in spatial dynamics of $[Ca^{2+}]_c$ in adrenal chromaffin cells **523**
T. Kanno and Y. Habara

Dose-dependency in spatial dynamics of $[Ca^{2+}]_c$ in pancreatic acinar cells **533**
Y. Habara and T. Kanno

Inositol 1,4,5-trisphosphate increases myoplasmic $[Ca^{2+}]$ in isolated muscle fibers. Depolarization enhances its effects **543**
J.R. Lopez and L. Parra

Regulation of plasma membrane permeability to calcium in primary cultures of rat hepatocytes **559**
Y. Zhang, J. Duszynski, S. Hreniuk, M.M. Waybill and K.F. LaNoue

Heterogeneous changes in $[Ca^{2+}]_i$ induced by glucose, tolbutamide and K^+ in single rat pancreatic B cells **577**
A. Herchuelz, R. Pochet, Ch. Pastiels and A. Van Praet

Number 9 October 1991

GTP-Sensitivity of the energy-dependent Ca^{2+} storage pool in permeabilized pancreatic acinar cells **587**
F.H.M.M. van de Put, J.J.H.H.M. De Pont and P.H.G.M. Willems

$[Ca^{2+}]_i$ recordings and the inactivation of the high voltage activated Ca^{2+} currents in the adult rat sensory neuron **599**
A. Peres, L. Bertollini, S. Camagni and E. Wanke

Prostaglandins enhance parathyroid hormone- evoked increase in free cytosolic calcium concentration in osteoblast-like cells 609
D.T. Yamaguchi, J. Green, C.R. Kleeman and S. Muallem

Synaptosomal $[Ca^{2+}]_i$ as influenced by Na^+/Ca^{2+} exchange and K^+ depolarization 623
C.B. Duarte, C.A.M. Carvalho, I.L. Ferreira and A.P. Carvalho

Preparation and handling of aequorin solutions for the measurement of cellular Ca^{2+} 635
O. Shimomura

Barbiturates inhibit intracellular Ca^{2+} rise induced by thrombin in rat platelets 645
D.S. Deshmukh, S. Kuizon and H. Brockerhoff

Number 10 November 1991

Effects of ACTH and angiotensin II on cytosolic calcium in cultured adrenal glomerulosa cells. Role of cAMP production in the ACTH effect 655
E. Tremblay, M-D. Payet and N. Gallo-Payet

Cytokinin increases intracellular Ca^{2+} in *Funaria*: Detection with Indo–1 675
S.H. Hahm and M.J. Saunders

Neural regulation of calmodulin in adult *Xenopus* leg muscle 683
B.K. Nishikawa and B.K. Kay

Intracellular free calcium concentration in the blowfly retina studied by Fura–2 695
P. Hochstrate and A. Juse

Perspectives in S-100 protein biology 713
REVIEW ARTICLE
R. Donato

Barium currents in developing skeletal muscle cells of normal and mutant mice foetuses with 'muscular dysgenesis' 727
T. Shimahara and R. Bournaud

Decavanadate displaces inositol 1,4,5 trisphosphate (IP_3) from its receptor and inhibits IP_3 induced Ca^{2+} release in permeabilized pancreatic acinar cells 735
K.J. Föhr, Y. Wahl, R. Engling, T.P. Kemmer and M. Gratzl

Compartmental analysis of $^{45}Ca^{2+}$ efflux in perfused rat liver: Effects of hormonal stimulation 743
D.S. Lapointe and M.S. Olson

Subject Index to Volume 12 755

Author Index to Volume 12 761